District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Hilcorp Energy Company	OGRID 372171
Contact Name: Lindsay Dumas	Contact Telephone: 832-839-4585
Contact email: Ldumas@hilcorp.com	Incident # *(assigned by OCD)* NCS1912055512
Contact mailing address: 1111 Travis St. Houston, TX 77002	

Location of Release Source

Latitude 36.815401 Longitude -107.305401
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: San Juan 30-5 unit 104	Site Type: Gas Well
Date Release Discovered: 4/26/19	API# *(if applicable)* 30-039-23311

Unit Letter	Section	Township	Range	County
G	13	30N	05W	Rio Arriba

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 48 bbls	Volume Recovered (bbls) 40 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by corrosion of a nipple on the water tank.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Per 19.15.29.7(A)(1) an unauthorized release of a volume, exclusing gas, of 25 barrels or more.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Chris Bramwell (HEC Area 12 Foreman) to Cory Smith (NMOCD), Jim Griswold (NMOCD) and JJ Miller (USFS) on April 26, 2019 at 7:47PM. Email is attached.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
All above actions have been completed.

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Lindsay Dumas Title: Environmental Specialist

Signature: Lindsay Dumas Date: 5-3-19

email: Ldumas@hilcorp.com Telephone: 832-839-4585

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>51 ft (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Lindsay Dumas Title: Environmental Specialist

Signature: Lindsay Dumas Date: 7-29-19

email: Ldumas@hilcorp.com Telephone: 832-839-4585

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Lindsay Dumas Title: Environmental Specialist

Signature: Lindsay Dumas Date: 7-29-19

email: Ldumas@hilcorp.com Telephone: 832-839-4585

OCD Only

Received by: OCD Date: 7/29/19

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Cory Date: 8/8/19

Printed Name: Cory Title: Environmental Specalist

Sampling Notification and Sampling Approval

Lindsay Dumas

From:	Lindsay Dumas
Sent:	Friday, May 3, 2019 10:42 AM
To:	'Smith, Cory, EMNRD'
Cc:	'Griswold, Jim, EMNRD'; 'jjmiller@fs.fed.us'; Kurt Hoekstra
Subject:	RE: [EXTERNAL] RE: Agency Reportable – OPS – SJE – AREA 12 – RUN 1203 – San Juan 30-5 Unit 104 – Spill Report
Attachments:	San Juan 28-4 Unit 18 Initial C-141 NCS1901155075.pdf

Cory – Please find attached the initial C-141 for the release on the San Juan 30-5 unit 104. Hilcorp would like to schedule confirmation sampling on May 7th at 10AM.

Please let me know if you have any questions.

Kind regards,

Lindsay Dumas
Environmental Specialist
Hilcorp Energy – L48 West
Office: 832-839-4585
Mobile: 281-794-9159

From: Lindsay Dumas
Sent: Friday, May 3, 2019 8:45 AM
To: 'Smith, Cory, EMNRD' <Cory.Smith@state.nm.us>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; 'jjmiller@fs.fed.us' <jjmiller@fs.fed.us>
Subject: RE: [EXTERNAL] RE: Agency Reportable – OPS – SJE – AREA 12 – RUN 1203 – San Juan 30-5 Unit 104 – Spill Report

Thanks Cory - Please use this distribution when replying to future emails.

From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
Sent: Tuesday, April 30, 2019 4:27 PM
To: Lindsay Dumas <ldumas@hilcorp.com>
Cc: Nick Kunze <nkunze@hilcorp.com>; Chris Bramwell <cbramwell@hilcorp.com>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; 'jjmiller@fs.fed.us' <jjmiller@fs.fed.us>; HERT-WEST <HERT-WEST@hilcorp.com>
Subject: [EXTERNAL] RE: Agency Reportable – OPS – SJE – AREA 12 – RUN 1203 – San Juan 30-5 Unit 104 – Spill Report

Lindsay,

Please respond to this release per 19.15.29.8 NMAC. Please see the below incident# assigned to the release.

NCS1912055512 SAN JUAN 30 5 UNIT #104 @ 30-039-23311

General Incident Information

Site Name:	SAN JUAN 30 5 UNIT #104
Well:	[30-039-23311] SAN JUAN 30 5 UNIT #104
Facility:	
Operator:	[372171] HILCORP ENERGY COMPANY
Status:	Closure Not Approved
Type:	Produced Water Release
District:	Aztec
Incident Location:	G-13-30N-05W Lot: 0 FNL 0 FEL
Lat/Long:	36.815401,-107.305401 NAD83

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Chris Bramwell <cbramwell@hilcorp.com>
Sent: Friday, April 26, 2019 7:47 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; 'jjmiller@fs.fed.us' <jjmiller@fs.fed.us>; HERT-WEST <HERT-WEST@hilcorp.com>
Cc: Nick Kunze <nkunze@hilcorp.com>; Lindsay Dumas <ldumas@hilcorp.com>
Subject: [EXT] Agency Reportable – OPS – SJE – AREA 12 – RUN 1203 – San Juan 30-5 Unit 104 – Spill Report

On April 26, 2019 at 12:30PM, Hilcorp Energy discovered a release on the San Juan 30-5 Unit 104, 3003923311, 36.8154, -107.3054. The release was 48 bbls of produced water due to corrosion of a nipple on the water tank. All fluids within the bermed area were hauled off along with the remaining 125 BBLS in the water tank.

Thank you,

Chris Bramwell
Hilcorp Energy
Production Foreman Area 12
Cell 505-486-9408

Lindsay Dumas

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, May 7, 2019 11:49 AM
To: Kurt Hoekstra
Cc: Lindsay Dumas
Subject: [EXTERNAL] RE: S.J. 30-5 Unit 104

Kurt,

OCD approves the relative sampling area as discussed please include this approval in your final C-141.

Thank you,

Cory Smith
Environmental Specialist

Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

-----Original Message-----
From: Kurt Hoekstra
Sent: Tuesday, May 7, 2019 10:47 AM
To: Smith, Cory, EMNRD
Cc: Lindsay Dumas
Subject: [EXT] S.J. 30-5 Unit 104

Hello Cory, per our conversation I am collecting 3 confirmation samples at this site for a produced water spill that stayed inside the berm.
#1 NW 1/4 of berm area
2 SW 1/4 of berm area
3. Background

Sent from my iPhone

Scaled Map

★ Impacted Area

Background #3

N.W. #1: 5 pt composite collected
36.815826, -107.305837

S.W. #2: 5 pt composite collected
36.815744, -107.305844

Field Drawing

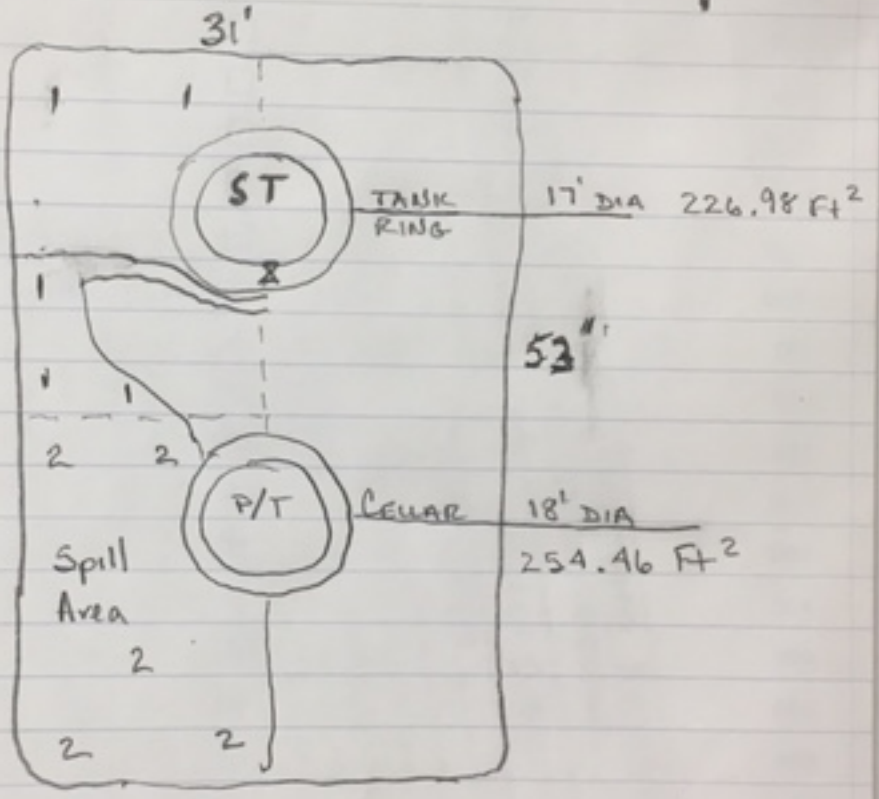
505-258-1159

Date 5-7-19

S.J. 30-5 Unit # 104

#3
X Back Ground @ Entrance to Loc

N



1,643 Sq. Ft
- 227
1416
- 254
1,162

NW. # 1
S.W. # 2
Background # 3
Per OCD Cory Smith

Page

Data table of soil contaminant concentration data

SOIL ANALYTICAL RESULTS
SJ 30-5 104
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	GRO+DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
BACKGROUND	5/7/2019	18	0.000623	0	0	0	0.00	0	10	10	19	29
N.W. #1	5/7/2019	347.0	0.00121	0	0	0	0.00	0.0	0.0	0.0	8	8
S.W. #2	5/7/2019	345	0.000531	0	0	0	0.00	0	0.0	0	6.5	6
NMOCD Standards		**20,000**	**10**				**50**			**1000**		**2,500**

Depth to water determination

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
SJ 04039 POD1		SJ	SJ	2	3	2	14	30N	05W	292702	4076834	0	275		
SJ 02384		SJ	RA	3	1	3	07	30N	04W	294736	4077762*	2235	185	95	90

Average Depth to Water: **95 feet**

Minimum Depth: **95 feet**

Maximum Depth: **95 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 292702.5 **Northing (Y):** 4076834.3 **Radius:** 3500

***UTM location was derived from PLSS - see Help**

No other water sources with 1/2 mile radius.

Photographs –Sampling 5-7-19

Well Sign

1

Photographs –Sampling 5-17-19

2

3

4

Photographs –Sampling 5-7-19

5

6

7

Numbers correspond to location pictures were taken.

Photographs –Sampling 5-7-19

8 - Background Sample

9 – N.W. Composite Sample

10 – N.W. Composite Sample

Photographs –Sampling 5-7-19

11 – S.W. Composite Sample

12 – S.W. Composite Sample

All results are below Table 1 Closure Criteria for Soils Impacted by a Release in 19.15.29. No further action required.

On 4/26/19, HEC discovered a 48 bbl produced water release on the San Juan 30-5 Unit 104 location. The release was due to corrosion of the nipple on the water tank. The release was contained within the bermed area and 40 bbls were immediately recovered. HEC scheduled confirmation sampling with NMOCD on 5/7/19. Kurt Hoekstra, HEC, reached out to Cory Smith, NMOCD, for approval of HEC's sampling plan because NMOCD was not available to witness sampling. Approval was given and HEC continued with sampling on 5/7/19. Pictures and field notes are attached. Lab results were below NMOCD action levels. No further action required.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 13, 2019

HilCorp-Farmington, NM

Sample Delivery Group:	L1096465
Samples Received:	05/08/2019
Project Number:	S.J. 30-5 #104
Description:	S.J. 30-5 #104
Site:	S.J. 30-5 #104
Report To:	Linday Dumas 382 Road 3100 Aztec, NM 87401

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

TABLE OF CONTENTS

BACKGROUND L1096465-01 Solid

Collected by: Kurt | Collected date/time: 05/07/19 10:52 | Received date/time: 05/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1278742	1	05/09/19 23:15	05/10/19 02:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1279127	1	05/09/19 08:38	05/13/19 03:23	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021	WG1280231	1	05/13/19 12:42	05/13/19 13:02	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1278251	1	05/08/19 21:52	05/09/19 23:20	FM	Mt. Juliet, TN

N.W. INSIDE BERM L1096465-02 Solid

Collected by: Kurt | Collected date/time: 05/07/19 11:00 | Received date/time: 05/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1278742	1	05/09/19 23:15	05/10/19 02:41	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1278688	1	05/09/19 08:38	05/09/19 18:31	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1278251	1	05/08/19 21:52	05/09/19 22:58	FM	Mt. Juliet, TN

S.W. INSIDE BERM L1096465-03 Solid

Collected by: Kurt | Collected date/time: 05/07/19 11:04 | Received date/time: 05/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1278742	1	05/09/19 23:15	05/10/19 02:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1279023	1	05/09/19 08:38	05/10/19 01:25	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1278251	1	05/08/19 21:52	05/09/19 23:32	FM	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	17.9	B	10.0	1	05/10/2019 02:16	WG1278742

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000623		0.000500	1	05/13/2019 03:23	WG1279127
Toluene	ND		0.00500	1	05/13/2019 13:02	WG1280231
Ethylbenzene	ND		0.000500	1	05/13/2019 13:02	WG1280231
Total Xylene	ND	J6	0.00150	1	05/13/2019 03:23	WG1279127
TPH (GC/FID) Low Fraction	ND		0.100	1	05/13/2019 03:23	WG1279127
(S) a,a,a-Trifluorotoluene(FID)	*101*		*77.0-120*		*05/13/2019 03:23*	WG1279127
(S) a,a,a-Trifluorotoluene(FID)	*91.2*		*77.0-120*		*05/13/2019 13:02*	WG1280231
(S) a,a,a-Trifluorotoluene(PID)	*94.3*		*72.0-128*		*05/13/2019 03:23*	WG1279127
(S) a,a,a-Trifluorotoluene(PID)	*94.4*		*72.0-128*		*05/13/2019 13:02*	WG1280231

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	10.3		4.00	1	05/09/2019 23:20	WG1278251
C28-C40 Oil Range	18.7		4.00	1	05/09/2019 23:20	WG1278251
(S) o-Terphenyl	*70.8*		*18.0-148*		*05/09/2019 23:20*	WG1278251

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	347		10.0	1	05/10/2019 02:41	WG1278742

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00121	B	0.000500	1	05/09/2019 18:31	WG1278688
Toluene	ND		0.00500	1	05/09/2019 18:31	WG1278688
Ethylbenzene	ND		0.000500	1	05/09/2019 18:31	WG1278688
Total Xylene	ND		0.00150	1	05/09/2019 18:31	WG1278688
TPH (GC/FID) Low Fraction	ND		0.100	1	05/09/2019 18:31	WG1278688
(S) a,a,a-Trifluorotoluene(FID)	*91.8*		*77.0-120*		*05/09/2019 18:31*	WG1278688
(S) a,a,a-Trifluorotoluene(PID)	*94.3*		*72.0-128*		*05/09/2019 18:31*	WG1278688

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	05/09/2019 22:58	WG1278251
C28-C40 Oil Range	7.51		4.00	1	05/09/2019 22:58	WG1278251
(S) o-Terphenyl	*64.8*		*18.0-148*		*05/09/2019 22:58*	WG1278251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	345		10.0	1	05/10/2019 02:58	WG1278742

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.000531		0.000500	1	05/10/2019 01:25	WG1279023
Toluene	ND		0.00500	1	05/10/2019 01:25	WG1279023
Ethylbenzene	ND		0.000500	1	05/10/2019 01:25	WG1279023
Total Xylene	ND		0.00150	1	05/10/2019 01:25	WG1279023
TPH (GC/FID) Low Fraction	ND		0.100	1	05/10/2019 01:25	WG1279023
(S) a,a,a-Trifluorotoluene(FID)	*92.6*		*77.0-120*		*05/10/2019 01:25*	WG1279023
(S) a,a,a-Trifluorotoluene(PID)	*95.1*		*72.0-128*		*05/10/2019 01:25*	WG1279023

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.00	1	05/09/2019 23:32	WG1278251
C28-C40 Oil Range	6.49		4.00	1	05/09/2019 23:32	WG1278251
(S) o-Terphenyl	*69.6*		*18.0-148*		*05/09/2019 23:32*	WG1278251

Method Blank (MB)

(MB) R3409957-1 05/10/19 00:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	3.59	J	0.795	10.0

L1096465-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1096465-02 05/10/19 02:41 • (DUP) R3409957-5 05/10/19 02:50

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	347	354	1	1.95		15

L1096669-84 Original Sample (OS) • Duplicate (DUP)

(OS) L1096669-84 05/10/19 03:15 • (DUP) R3409957-6 05/10/19 03:41

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	12.9	12.8	1	1.25		15

Laboratory Control Sample (LCS)

(LCS) R3409957-2 05/10/19 00:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.7	80.0-120	

L1096465-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096465-01 05/10/19 02:16 • (MS) R3409957-3 05/10/19 02:24 • (MSD) R3409957-4 05/10/19 02:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	17.9	528	528	102	102	1	80.0-120			0.142	15

Method Blank (MB)

(MB) R3409970-5 05/09/19 13:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	0.000164	J	0.000120	0.000500
Toluene	0.000332	J	0.000150	0.00500
Ethylbenzene	0.000197	J	0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0233	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.2*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*101*			*72.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3409970-1 05/09/19 11:03 • (LCSD) R3409970-2 05/09/19 11:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0507	0.0572	101	114	76.0-121			12.1	20
Toluene	0.0500	0.0499	0.0552	99.7	110	80.0-120			10.2	20
Ethylbenzene	0.0500	0.0501	0.0577	100	115	80.0-124			14.1	20
Total Xylene	0.150	0.160	0.179	107	119	37.0-160			11.0	20
(S) a,a,a-Trifluorotoluene(FID)				*95.5*	*94.6*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*96.8*	*95.6*	*72.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3409970-3 05/09/19 11:56 • (LCSD) R3409970-4 05/09/19 12:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.81	5.60	106	102	72.0-127			3.74	20
(S) a,a,a-Trifluorotoluene(FID)				*107*	*107*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*104*	*105*	*72.0-128*				

Method Blank (MB)

(MB) R3410379-3 05/09/19 23:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000244	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.2*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*99.3*			*72.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410379-1 05/09/19 21:58 • (LCSD) R3410379-2 05/09/19 22:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.36	5.61	97.5	102	72.0-127			4.57	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*104*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*104*	*102*	*72.0-128*				

Laboratory Control Sample (LCS)

(LCS) R3410379-5 05/10/19 00:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0493	98.7	76.0-121	
Toluene	0.0500	0.0479	95.7	80.0-120	
Ethylbenzene	0.0500	0.0510	102	80.0-124	
Total Xylene	0.150	0.154	103	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*95.5*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*97.7*	*72.0-128*	

Method Blank (MB)

(MB) R3410590-4 05/13/19 02:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0282	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*96.0*			*72.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410590-1 05/13/19 01:04 • (LCSD) R3410590-2 05/13/19 01:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0397	0.0415	79.4	83.1	76.0-121			4.59	20
Total Xylene	0.150	0.119	0.128	79.1	85.5	37.0-160			7.86	20
(S) a,a,a-Trifluorotoluene(FID)				*103*	*105*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*99.9*	*102*	*72.0-128*				

Laboratory Control Sample (LCS)

(LCS) R3410590-3 05/13/19 02:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.53	82.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*94.4*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*102*	*72.0-128*	

L1096465-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096465-01 05/13/19 03:23 • (MS) R3410590-5 05/13/19 04:03 • (MSD) R3410590-6 05/13/19 07:49

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.000623	0.0252	0.0257	49.1	50.2	1	10.0-155			2.33	32
Total Xylene	0.150	ND	0.0742	0.0796	49.5	53.1	1	10.0-160	J6	J6	7.02	32
(S) a,a,a-Trifluorotoluene(FID)					*99.5*	*102*		*77.0-120*				

L1096465-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096465-01 05/13/19 03:23 • (MS) R3410590-5 05/13/19 04:03 • (MSD) R3410590-6 05/13/19 07:49

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) a,a,a-Trifluorotoluene(PID)					*97.5*	*96.8*		*72.0-128*				

Method Blank (MB)

(MB) R3410711-3 05/13/19 12:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Toluene	0.000298	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
(S) a,a,a-Trifluorotoluene(FID)	*96.7*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*99.7*			*72.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410711-1 05/13/19 10:00 • (LCSD) R3410711-2 05/13/19 10:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	0.0500	0.0474	0.0445	94.7	89.1	80.0-120			6.16	20
Ethylbenzene	0.0500	0.0494	0.0467	98.7	93.3	80.0-124			5.67	20
(S) a,a,a-Trifluorotoluene(FID)				*94.7*	*96.5*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*97.6*	*98.0*	*72.0-128*				

Method Blank (MB)

(MB) R3409829-4 05/09/19 17:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*68.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3409829-1 05/09/19 12:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.9	79.8	50.0-150	
(S) o-Terphenyl			*35.3*	*18.0-148*	

L1096296-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096296-01 05/09/19 14:45 • (MS) R3409829-2 05/09/19 14:56 • (MSD) R3409829-3 05/09/19 15:08

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.6	116	107	79.2	0.000	0.000	5	50.0-150	J6	J3 J6	29.9	20
(S) o-Terphenyl					*58.2*	*59.2*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
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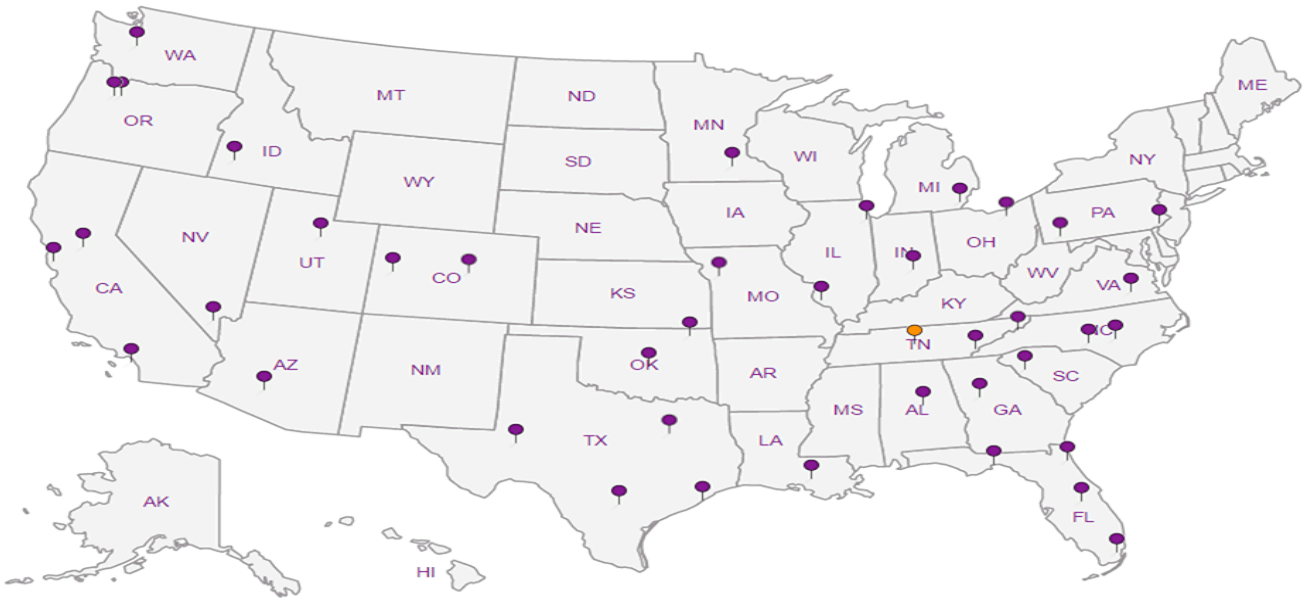
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



HilCorp-Farmington, NM
382 Road 3100
Aztec, NM 87401

Billing Information:

Pres Chk

khoekstra@hilcorp.com

Report to: LINDSAY DUMAS

Email To: ldumas@hilcorp.com

Project Description:

City/State Collected:

Phone: **505-486-9543**
Fax:

Client Project #

Lab Project #

Collected by (print): KURT

Site/Facility ID #: S.J. 30-5 # 104

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
X Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH 8015 - DRO, GRO, MRO	BTEX 8021	CHLORIDE								Remarks	Sample # (lab only)
BACKGROUND	GRAB	SOIL	6"	5-7	10:52	1	X	X	X									-01
N.W. INSIDE BERM	COMP	"	6"	"	11:00	1	X	X	X									02
S.W. INSIDE BERM	"	"	6"	"	11:04	1	X	X	X									03
							RAD SCREEN: <0.5 mR/hr											

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
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L # L1096465

Table # J161

Acctnum: **HILCORANM**

Template:

Prelogin:

TSR:

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ___

Remarks:

pH ___ Temp ___

Flow ___ Other ___

Samples returned via: X UPS X FedEx ___ Courier ___

Tracking # 4882 8626 3559

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		X Y N
Bottles arrive intact:		X Y N
Correct bottles used:		X Y N
Sufficient volume sent:		X Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Kurt Hoekstra	5-7-19	1:45	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes (No) HCL / MeoH TBR

Temp: 1.6 +0 -1.6 °C Bottles Received: PN A3 3 4oz

Date: 5/8/19 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)